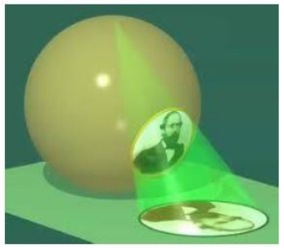
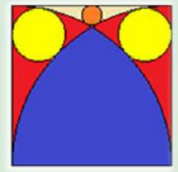
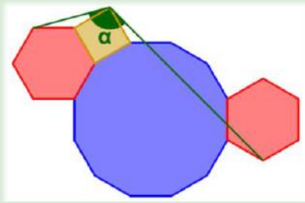
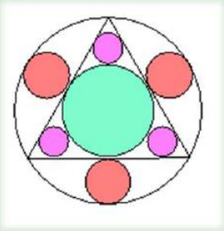
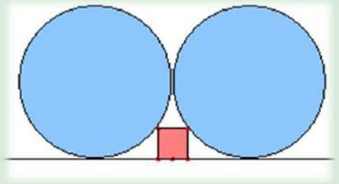
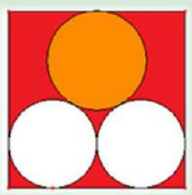
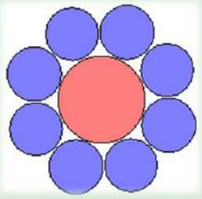
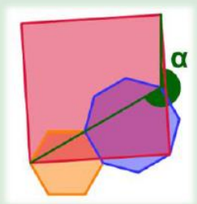
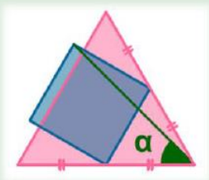
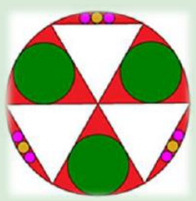
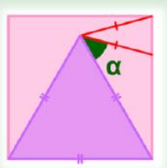
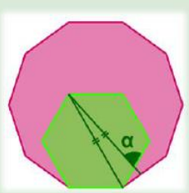
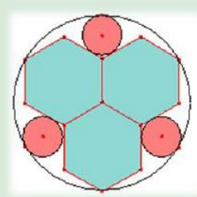
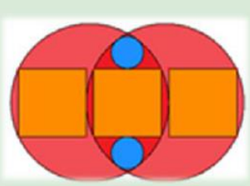
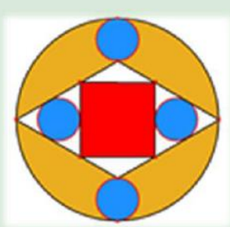
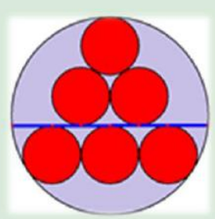
JULY

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	U
					**1** In the figure there is a square, two quadrants and three circumferences, two of them equal. Calculate the ratio of their radii 	**2**
3 	**4** Regular dodecagon, two regular hexagons and square. Find reasonably α	**5** 	**6** Eight circles are outer tangents two by two and all are outer tangents to one. Calculate the ratio between the radii of the two types of circles. Calculate the ratio between the areas of the sum of the eight blue and the red.	**7** 	**8** Two tangent circles of radius R are tangent to a straight line. Two vertices of a square touch the two circles and the other two vertices are on the line. Determine the side c of the square in terms of R. *Okayama Headquarters*	**9**
10 Inside a square there are three circumferences, two of them with the same radius, tangent two to two. Calculate the ratio of the radii of the circles. *Aichi Headquarters*	**11** 	**12** An equilateral triangle is inscribed in a circle of radius R. 7 circles have been drawn. One inscribed to the triangle, three external tangents to the triangle and tangents to the first circumference. And, finally, three interior tangents to two sides of the triangle and to the inscribed circle. Calculate the radii of the circles. *Chiba Headquarters*	**13** 	**14** Regular hexagon, regular octagon and square. Find reasonably α 	**15** Equilateral triangle and square. Find reasonably α 	**16**
17  Suwa Nagano Temple.	**18** Square and equilateral triangle. Find reasonably α 	**19** Regular decagon and regular hexagon. find reasonably α 	**20** In a circle of radius R there are three equal regular hexagons and three equal circles, each one tangent to the outer circle and to one side of two hexagons. Calculate the radius of the circles. *Gunma Headquarters. Satimiya Shrine, 1824*	**21** 	**22 π day-2** In the sangaku there is a circle of radius R and 6 circles of the same radius inside it. Three tangents two to two and two of them tangent to a chord. Three lower tangent and aligned. Three of these are interior tangents to the circumference of radius R. Calculate the radius of the 6 circumferences. *Suwa Nagano Temple. 1879*	**23**
24/31 Outer circle of radius R, three equilateral triangles, three circles tangent to two triangles and to the outer circumference, three circles tangent to the midpoint of the equilateral triangle and tangent to the outer circumference, six circles each tangent to two circles and next to the triangle. Calculate the radii of the three types of circles.	**25** Suwa Nagano Temple. 1879 	**26** Three equal squares have been inscribed in two intersecting circles of equal radius R. The central square is inscribed at the intersection of the two circles. The lateral squares are tangent to the two circles. Two equal circles are tangent to the circles of radii R and to the sides of the central square. Determine the measure of the side of the square and the radius of the tangent circle.	**27** 	**28** In the sangaku, a circumference of radius R is shown, a rhombus with a diagonal the diameter of the circumference and the acute angle of 60°. In the rhombus he has inscribed a square Check that the four circles have the same radius. *Suwa Nagano Temple. 1879*	**29** 	**30**